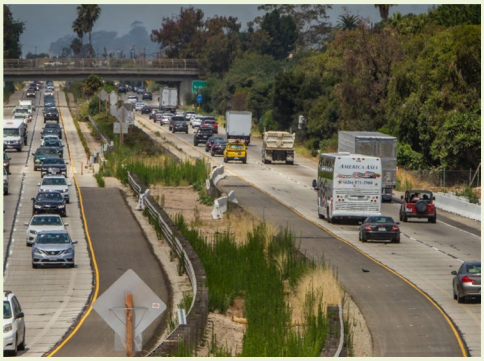
Noise

INTRODUCTION

The Noise Element identifies major sources of noise, estimates the extent noise impacts the City of Carpinteria (City), and provides objectives and policies to avoid or minimize unacceptable noise. Considering noise levels in the planning process is essential to controlling its impact on the community and can improve the quality of life for City residents.



The City is primarily a developed environment that is subject to various community noise sources, including automobile and train traffic, agricultural activity, and short-term nuisances such as construction, loud events, or landscape maintenance. The most prevalent noise sources in the City are motor vehicle traffic on U.S. Highway 101 (U.S. 101) and rail traffic on the Union Pacific Railroad (UPRR). Lower levels of noise are generated by traffic on local arterial streets such as Carpinteria and Linden Avenues. Typical urban noise sources, such as bars and restaurants, community events, construction activities, landscape equipment, refuse collection, and emergency vehicle sirens contribute to the overall noise environment. Although no airport operates near the City, periodic overhead noise from aviation operations occurs, as well as sonic booms associated with operations at Vandenberg Space Force Base in Lompoc.

The Noise Element fulfills State Planning law requirements to prepare and adopt a Noise Element that identifies and appraises noise problems in the community (California Government Code [Gov. Code], §65302(f)). The Noise Element is required to analyze and quantify stationary and mobile noise sources to the extent practicable. The Coastal Act does not specifically address noise or noise reduction and the Noise Element is not part of the Coastal Land Use Plan (CLUP), although Noise Element policies apply throughout the City.

Issue Areas

The Noise Element addresses the following issue areas:

- **Transportation Noise,** including U.S. 101, train traffic along UPRR, primary arterials, and major local roads.
- **Stationary Noise Sources,** including long-term operational sources such as that within Industrial or Agricultural land use areas.
- **Short-term Noise** such as construction activities, landscape maintenance activities, amplification systems for special events, and regional aviation operations.

The issue areas addressed in the Noise Element complement the goals and policies contained in other CLUP/General Plan Elements. The **Land Use Element** addresses issues related to land use compatibility, sensitive receptors, and transportation corridors. The **Circulation Element** contains a policy framework related to trucking routes, UPRR, and U.S. 101, which are major transportation-related noise sources within the City.

OVERVIEW

Noise

Noise is defined as a sound, typically associated with being loud or undesirable. Short- and long-term increases in noise can cause hearing loss, disrupt communication, disturb sleep, and decrease physical or mental performance. Noise may prompt the feeling of annoyance depending on the magnitude, duration, and time of the noise event. Sound is transmitted by pressure waves that travel through the air. Sound pressure level is the most common descriptor used to characterize ambient noise and is measured in decibels (dB), a logarithmic unit to identify the intensity of sounds. Human hearing can detect dB levels at 0 dB, while noises around 120 to 140 dB correspond to the threshold of pain. Because of the range of human hearing, a logarithmic loudness scale is used to keep intensity levels within a convenient and manageable range. Equivalent Sound Level (Leq) and Community Noise Equivalent Level (CNEL) are also used as noise level descriptors.

The human ear is not equally sensitive to all sound frequencies. When assessing potential noise impacts, sound is measured to emphasize the range of frequencies most audible to the human ear, focusing on those between 1,000

Definitions

Decibel (dB): A logarithmic unit for expressing the relative intensity of sounds.

A-weighted Decibel (dBA): The sound level obtained by using the A-weighting filter of a sound level meter, expressed in dB. A-weighting emphasizes the range of sound frequencies that are most audible to the human ear and excludes very low and very high frequencies.

Equivalent Sound Level (Leq): The single steady A-weighted (dBA) level that is equivalent to the same amount of energy as that contained in the actual fluctuating sound over a given period. Leq is essentially the average noise level and is typically summed over a 1-hour period.

Community Noise Equivalent Level (CNEL): The average sound level during a 24-hour period based on the A-weighted decibel (dBA). To account for increased noise sensitivity in the evening (7:00 p.m. to 10:00 p.m.) and at night (10:00 p.m. to 7:00 a.m.), the CNEL adds 5-dBA and 10-dBA penalties, respectively.

Hertz (Hz): A unit used to measure the frequency of a sound, corresponding to the number of cycles per second.

to 5,000 Hertz (Hz). This measurement is referred to as A-frequency weighting, expressed as A-weighting decibels (dBA). A-frequency weighting is typically applied to community noise measurements.

Noise level increases of 3 dBA are barely perceptible to most people, a 5-dBA increase is readily noticeable, and a difference of 10 dBA would be perceived as doubling of loudness. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud); see Table N-1.

Table N-1. Representative Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Power Saw	—110—	Rock Band
Jet Fly-over at 1,000 feet		Crying Baby
Subway	—100—	
Gas Lawnmower at 3 feet		
Rail Transit Horn/ Tractor	—90—	
Jack Hammer		Food Blender at 3 feet
Rail Transit At-grade (50 mph)	—80—	Garbage Disposal at 3 feet
Noisy Urban Area during Daytime		
Gas Lawnmower at 100 feet	—70—	Vacuum Cleaner at 10 feet
Rail Transit in Station/ Commercial Area		Normal Speech at 3 feet
Heavy Traffic at 300 feet	—60—	Sewing Machine
Air Conditioner		Large Business Office
Quiet Urban Area during Daytime	—50—	Dishwasher in Next Room
		Refrigerator
Quiet Urban Area during Nighttime	—40—	Theater, Large Conference Room (background)
Quiet Suburban Area during Nighttime		
	—30—	Library
Quiet Rural Area during Nighttime		Bedroom at Night, Concert Hall (background)
	—20—	
		Broadcast/Recording Studio
	—10—	
Lowest Threshold of Human Hearing	—0—	Lowest Threshold of Human Hearing

Source: California Department of Transportation (Caltrans), Noise, Air Quality, and Hazardous Waste Management Office, *Technical Noise Supplement* (October 1998).

Vibration

Vibration is the physical effect of sound radiated through the ground. Most perceptible indoor vibration is caused by sources within buildings such as the operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. In the City, the primary sources of vibration are associated with U.S. 101, the UPRR corridor, large trucks, and temporary construction activities. If a roadway is smooth or newly repaved, the groundborne vibration from traffic is rarely perceptible. The City's roads with more damage, roughness, or cracks will produce more vibration from the road surface interaction with traffic. The vibration of floors and walls from sound waves may also cause perceptible vibration, such as the rattling of windows or a rumbling noise. Ground-borne vibration is generally perceptible only inside buildings and not outdoors. Although ground motion may be perceived, without the effects associated with the shaking of a building, the motion does not provoke the same adverse human reaction. In addition, the rumble noise that usually accompanies the building vibration is perceptible only inside buildings. Typically, groundborne vibration generated by manmade activities rapidly reduces in intensity with distance from the source of the vibration. Man-made vibration issues are therefore usually confined to short distances from the source (e.g., 50 feet).

Definition

Vibration: An oscillatory motion that can be described in terms of displacement, velocity, or acceleration. Vibration is expressed in vibration decibels (VdB) and describes the level of ground movement.

The ground motion caused by vibration can be measured as particle velocity in inches per second (in/sec); in the U.S. this is referenced as vibration decibels (VdB; California Department of Transportation [Caltrans] 2020). The vibration level at which continuous vibration is strongly perceptible is 0.1 in/sec. For incidental groundborne vibration, 0.035 in/sec is barely perceptible while 2.0 in/sec is felt severely (Caltrans 2020). Caltrans and the Federal Transit Administration have developed vibration criteria based on building use, such as workshops, offices, residences, and institutions with primarily daytime use. The maximum criteria for frequent and/or consistent vibration at sensitive noise receptors (e.g., residences) is approximately 72-75 VdB (Caltrans 2020; Federal Transit Administration 2018).

Compatibility with Noise-Sensitive Land Uses

Identifying noise-sensitive land uses is necessary to determine acceptable noise levels in areas throughout the City and inform future land use planning. Land uses particularly sensitive to noise, include residences, hotels and motels, schools, libraries, medical care facilities, retirement/assisted living homes, recreational areas, and places of worship and are typically defined as sensitive receptors. To control acceptable noise levels, the City may apply additional measures to limit the effect of noise on future land uses, which include spatial

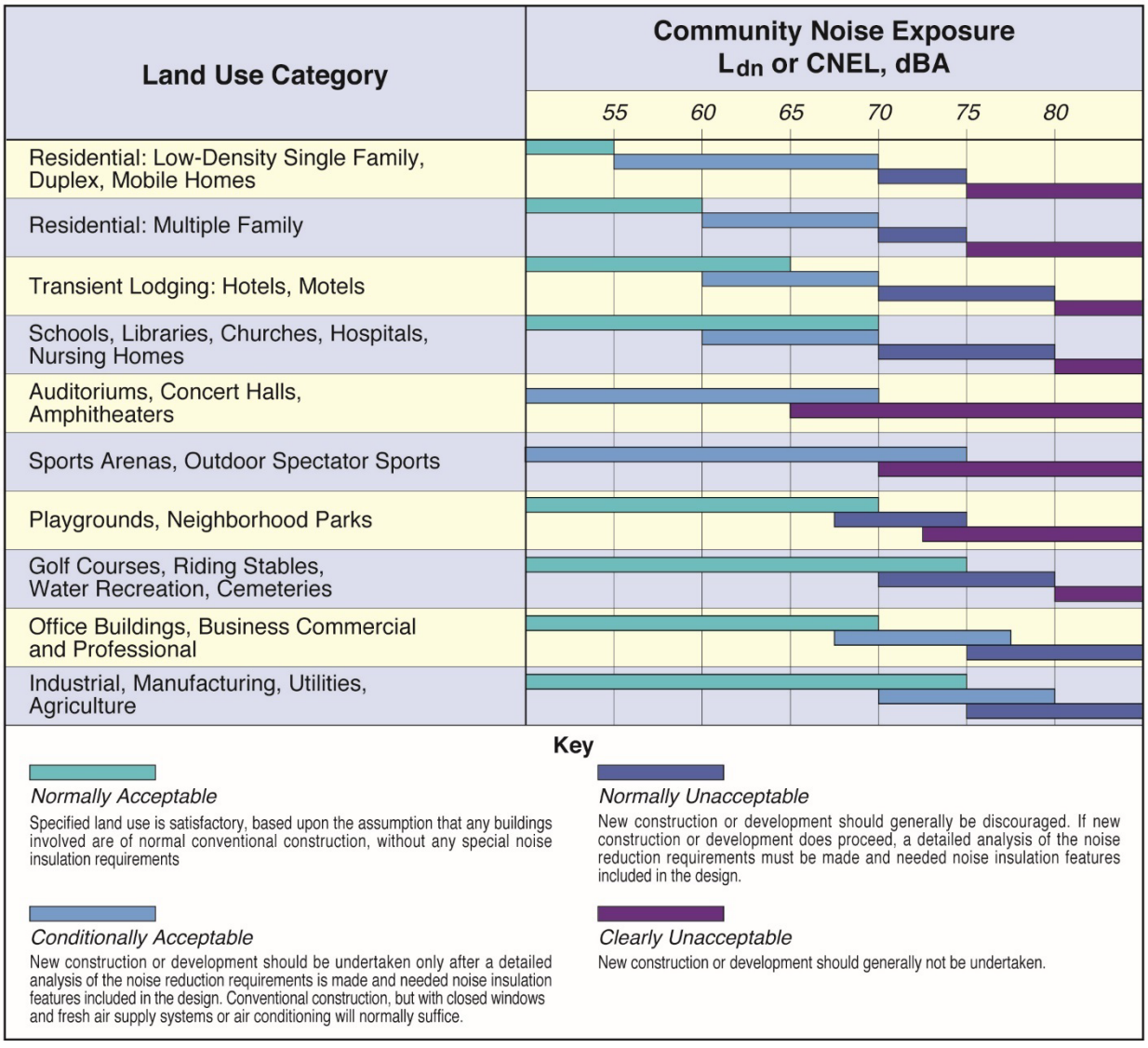
Definition

Sensitive Noise Receptors: Populations that are more susceptible to the effects of noise than the population at large. The most sensitive land uses generally include residences, school, churches, hospitals, childcare facilities, and convalescent care facilities.

separation, site planning, and building design techniques that address noise exposure and the insulation of buildings to reduce interior noise levels.

The State of California Noise and Land Use Compatibility Guidelines provide a matrix recommended by the Governor's Office of Planning and Research [OPR] General Plan Guidelines for determining whether ambient noise levels are compatible with certain land uses (Table N-2).

Table N-2. Acceptable Noise Levels



Source: (OPR 2017)

Based on this State guidance, the City's Noise Element recognizes that exterior noise for outdoor use areas of sensitive receptors, including yards, patios, and balconies, should not exceed 65 dBA, while interior noise levels should not exceed 45 dBA. Other land use types such as commercial and industrial use are more tolerant and compatible with higher noise environments both outdoors and indoors, ranging up to 75 dBA in exterior spaces and up to 65 dBA in interior spaces.

Table N-3 summarizes local noise standards for the City adapted from State guidance. Similarly, while significant vibration is typically confined to areas near or immediately adjacent to the source (e.g., UPRR) and rarely extends more than 25 to 50 feet, the City generally recognizes that the Caltrans standard of 0.1 in/sec is an applicable maximum vibration standard for sensitive receptors.

Table N-3. Interior and Exterior Noise Standards in Carpinteria

Land Use Type	Community Noise Equivalent Level (CNEL)	
	Exterior	Interior
Residential*	65 dBA	45 dBA
Hotels/Motels*	65 dBA	45 dBA
Schools, Libraries, Churches, Hospitals, Nursing Homes*	65 dBA	45 dBA
Auditoriums, Amphitheaters*	65 dBA	45 dBA
Outdoor Spectator Sports (e.g. Carpinteria High School)*	65 dBA	N/A
Playgrounds, Neighborhood Parks	70 dBA	N/A
Golf Courses, Cemeteries	75 dBA	N/A
Office Buildings, Business Commercial and Professional	70 dBA	50 dBA
Industrial, Utilities, Agriculture	75 dBA	65 dBA

California Code of Regulations, Title 24, Part 2
* Indicates a noise-sensitive land use type in the City

For interior noise, depending on the age of the structure and construction techniques (e.g., insulation, double-paned windows), interior noise levels are generally reduced from 20 to 25 dBA from exterior noise. Sound walls, topography, and intervening buildings such as commercial uses can also reduce exterior noise levels from 5-10 dBA.

NOISE AND VIBRATION SOURCES AND CONTOURS

The noise environment in Carpinteria varies from an occasional aircraft or train passing by to continuous noise from sources such as U.S. 101 and UPRR, along with lower levels of noise generated by local arterial streets such as Carpinteria Avenue. Periodic construction noise, landscape maintenance, and that from agricultural activities that border the City also create intermittent short-term noise. Sonic booms, which are sounds associated with shock waves created when an object travels through the air faster than the speed of sound, are audible in the City from operations of Vandenberg Space Force Base located approximately 70 miles northwest.

U.S. 101

U.S. 101 crosses the City from northwest to southeast, with several neighborhoods and other sensitive receptors exposed to U.S. 101 transportation noise. Growth in traffic volumes along U.S. 101 is projected to increase average noise levels by 1 to 2 dB between 2020 and 2040 (SBCAG 2013). However, as part of the South Coast 101 HOV (High-Occupancy Vehicle) Widening Project

completed by 2021, six sound walls were installed along approximately 7,700 feet (1.5 miles) of the freeway, with noise attenuating paving, reducing noise exposure to protected residential neighborhoods and sensitive receptors such as hotels and motels that may occur from the addition of a third lane through the City (Caltrans 2014; Figure N-1). Within the City, average daily trips on U.S. 101 as of 2010 varied from approximately 63,900 to 65,600, and are projected to increase to 87,000 to 98,000 by 2040 (SBCAG 2013). Despite this increase in traffic, noise levels along U.S. 101 are projected to increase by approximately 1 dBA, a change not perceptible to residents; a 3 dBA change is a typical threshold for humans to notice. Areas directly adjacent to U.S. 101 are mapped with noise exposure levels of 65 to 80 dBA; the 65-dBA contour extends up to 600 feet (0.1 miles), approximately two city blocks away from U.S. 101. These noise level estimates assume a baseline CNEL of 82 dBA at 100 feet from the centerline of U.S. 101 (without noise attenuation). Noise reductions of 3 dBA occur with the doubling of distance away from U.S. 101, and further noise reductions of 2 to 10 dBA are provided by barriers such as sound walls, buildings, and topography (i.e. locations where U.S. 101 is below building grade).

Union Pacific Railroad

UPRR is a major noise source and closely parallels U.S. 101 in the western portion of the City, then bisects the Downtown and Beach Neighborhood before following the coastline past the Arbol Verde/ Concha Loma neighborhoods and Carpinteria Bluffs to the south. Passing freight and passenger trains generate high noise levels, along with crossing safety bells and horns. Over a dozen trains pass through the Arbol Verde/Concha Loma neighborhoods and the Downtown every day, exposing City residents and visitors to noise levels averaging 65 to 70 dBA, with the 65 dBA contour located approximately 50 feet away from UPRR. At the four City intersections of the UPRR with Sandyland Cove Road, Linden Avenue, Palm Avenue, and Dump Road, this 65 dBA noise contour extends approximately one city block away due to train horn use. A future at-grade railroad crossing is proposed along Calle Ocho, which, if completed will also require horn use.

Vibration impacts due to freight and passenger trains, which travel at approximately 40 miles per hour, are minimal throughout the City and produce 65 VdB vibration levels approximately one city block away from the railroad. Noise-sensitive land uses such as residences are located within the 65 VdB vibration level, which is less than the Caltrans and Federal Transit Administration criteria for such uses. Although future changes in rail traffic through the City are difficult to forecast, the California State Rail Plan projects passenger and freight railroad demand to approximately double in Santa Barbara County between 2013 and 2040 (Caltrans 2018).

Noise Contours from U.S. 101 and UPRR

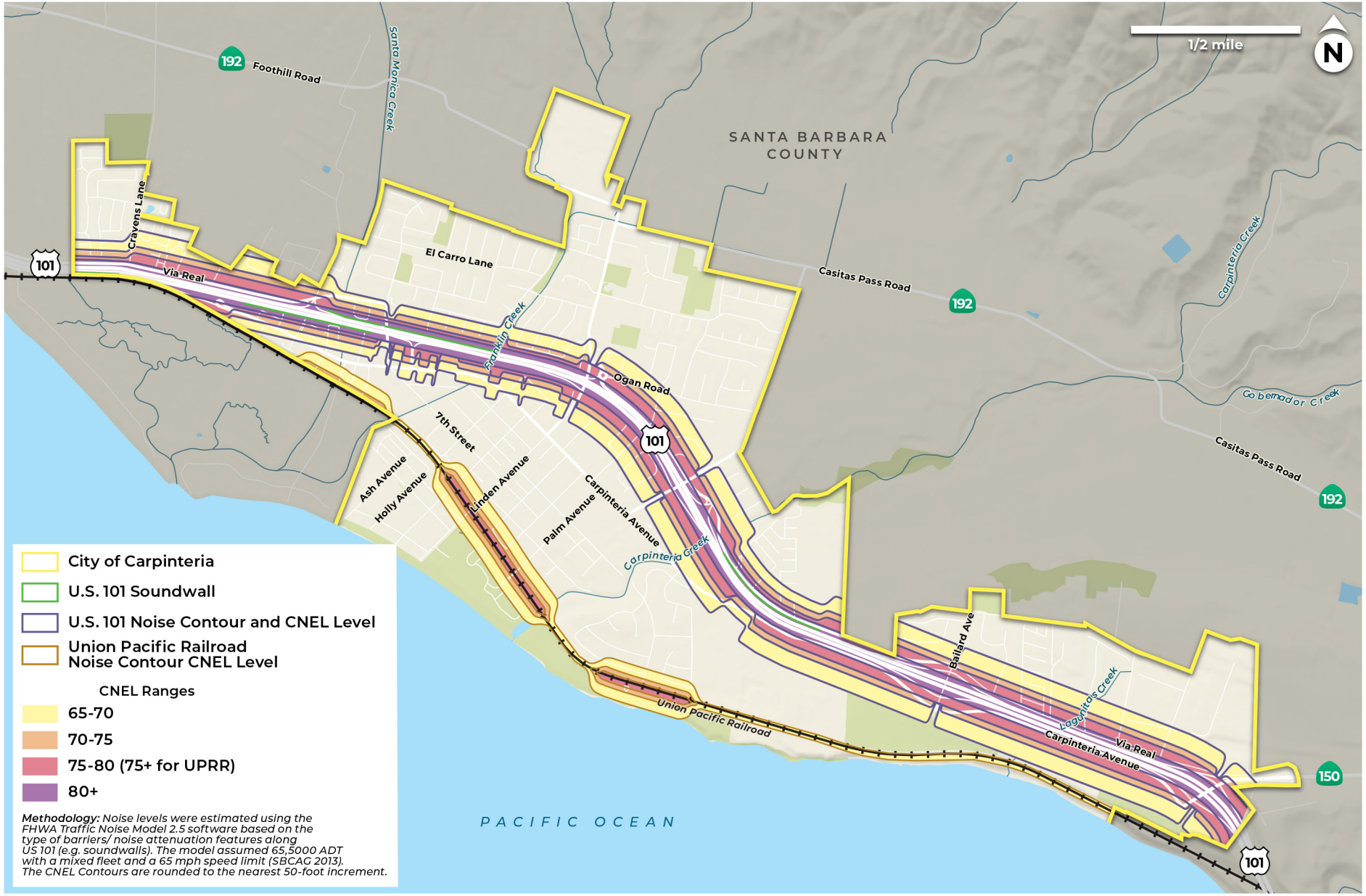
Noise contours mapped in 2020 provide an estimate of future noise exposure in the City due to U.S. 101 and the UPRR (Figure N-1). The 65-dBA contour in Figure N-1 is generally an indicator of the upper limit of acceptable exterior noise exposure for sensitive receptors. Future development within the City, such as changes in land use within the Carpinteria Bluffs, Downtown, and Eastern Industrial Area may also result in changes to the noise environment. Future noise associated with industrial land uses and agricultural areas bordering the City would be expected from sources such as truck traffic serving these uses. Based upon a review of the Regional Transportation

Improvement Plan and the State Rail Plan, although there is interest in expanding passenger rail service, there are no current proposals for the expansion of either passenger or freight rail service (California Transportation Commission 2020; Caltrans 2018). However, the State Rail Plan is undergoing an update to support a unified statewide network that aligns needs for passenger and freight service and connects passenger rail to other modes. Long-term goals (2050) of the proposed State Rail Plan include increasing regional passenger rail service through Carpinteria with hourly service. The future network will capture an increasing share of passenger and freight travel by rail to support economic, environmental, and equity goals (Caltrans 2023).

Noise levels in the City were estimated for the notable noise source routes (U.S. 101 and UPRR corridor) based on the type of barriers/noise attenuation features along these routes (e.g. topography, buildings, and sound walls). Vehicle operations along U.S. 101 were estimated based on noise levels presented within the 2040 Santa Barbara County Regional Transportation Plan and Sustainable Communities Environmental Impact Report (State Clearinghouse #2012091050). The model used an assumption of 65,500 average daily trips and a mix of vehicle types based on 2010 traffic volumes (SBCAG 2013). Existing vehicle operations along U.S. 101 were projected to produce a baseline noise level of 82 CNEL at 100 feet at building grade with no barrier. The noise contours were then estimated based on types of noise attenuation features along U.S. 101, including topography (i.e., below or at grade), one- and two-story buildings, and sound walls proposed and implemented by Caltrans in the South Coast 101 HOV (High-Occupancy Vehicle) Widening Project (Caltrans 2018). Both noise (including horn utilization) and vibration contours associated with railway operations were developed utilizing the Federal Transit Administration Transit Noise and Vibration Impact Assessment manual based on existing rail traffic of 15 (12 passenger and 3 freight) trains per day (Federal Transit Administration 2018).

Throughways, Main Streets, and Local Connectors

Carpinteria Avenue, Linden Avenue, Casitas Pass Road, and Via Real are the major roadways in the City that generate moderate noise levels and pass through primarily commercial and residential land uses (Figure N-1). These roadways generally carry between 8,000 to 14,000 average daily trips which typically generate from 45 to 55 dBA CNEL from these roadways' centerline (Penfield & Smith 2007). Throughways and main streets generally do not produce excessive levels of noise or vibration that exceed the 65 dBA threshold for the exterior of sensitive receptors such as residences. Noise levels that exceed 55 dBA CNEL along local streets are typically caused by intermittent and temporary incidents, such as car horns or collisions. Further, roadway noise levels may be attenuated through increased use of electric cars, as well as roadway maintenance and materials that reduce tire tread noise.



wsp

Carpinteria Transportation Noise Levels

FIGURE N-1

Stationary Noise Sources

Stationary noise sources include truck loading bays at markets, commercial or industrial uses, agricultural shipping facilities, greenhouses and fields, landscaping equipment, outdoor loudspeakers, or noise generated by utility or industrial plant operations. All these sources can affect adjacent residential areas and other sensitive receptors. Historic and existing stationary noise sources include uses such as the former oil and gas plant and supply boats operating at Casitas Pier, light industrial use near Linden Avenue, the High School stadium loudspeakers, and the Carpinteria community pool. Stationary long-term sources do not present a significant issue, as large industrial and agricultural facilities are not present in the City.

Short-Term Noise Sources

Short-term noise sources within the City include construction, waste collection, landscaping equipment such as leaf blowers and lawnmowers, street sweeping, special events (e.g., Carpinteria Avocado Festival), and agricultural operations. The City limits construction activity and equipment maintenance to the hours between 7:00 a.m. and 5:00 p.m., Monday through Friday, and prohibits such activities on weekends or state holidays (e.g., Thanksgiving, Christmas Day). The noise levels for special events fluctuate depending on the number of guests, degree of sound amplification, and hours of operation. For special events requiring a permit (those held in the public right-of-way), the event's hours of operation and the use of sound amplification equipment must be pre-approved by the City. Further, all businesses hosting live entertainment, including live music, must apply for and obtain an annual Entertainment License from the City. Entertainment Licenses may be conditioned to limit or restrict how live entertainment may be conducted (e.g., hours, noise level, lighting, location, etc.). Otherwise, noise complaints that are occasionally received by the City are addressed by the City's code enforcement officers or law enforcement.

A unique source of short-term noise affecting the City is sonic booms generated by rocket launches from Vandenberg Space Force Base (VSFB). VSFB's Space Launch Delta 30 supports West Coast launch activities for the Air Force, Department of Defense, National Aeronautics and Space Administration (NASA), national programs, and various private industry contractors (United States Space Force 2025). Depending on numerous factors such as aircraft size, speed, altitude, and distance, sonic booms can generate enormous amounts of sound energy. This sound energy is presented in terms of peak sound pressure level in pounds per square foot (psf). Whether or not these sonic booms are perceptible by an individual is highly dependent on factors such as launch trajectory and meteorological conditions.

In recent years, with the increase in commercial launch operations at VSFB, the occurrence of sonic booms being perceived by residents of the City has become more frequent. On some occasions, sonic booms with high peak sound pressure levels have impacted the City, with some being compared to the sound of thunder or a car crash, startling residents, shaking houses, and setting off car alarms. The occurrence of disruptive sonic boom events may increase over the near term as VSFB plans to increase commercial launch operations. For instance, in 2025, it is anticipated that VSFB will increase the annual SpaceX Falcon launch cadence from 50 launches per year to 100 launches per year (Department of the Air Force 2025).

Vibration Sources

Vibration sources are generally not an issue in Carpinteria as groundborne vibration is temporary and decays rapidly as it travels a short distance. Trains along the UPPR are the primary sources of vibration disturbances in the City, with potential for effects generally limited to directly adjacent land uses and sensitive receptors through ground-borne vibration. Noise-sensitive land uses located adjacent to the UPRR include residences and an elementary school. Trains produce different vibration levels based on speed and size; when analyzing impacts, frequency is also taken into consideration. The worst-case scenario would be subjective, as greater vibration levels but infrequent occurrence (freight) may be more tolerable to some than lower vibration levels at a higher frequency (passenger). The VdB metric is not a 24-hour average metric like CNEL, but a single-event metric that can measure short-and long-term vibration.

Noise Evaluation and Mitigation

Noise and vibration are regulated and mitigated through the California Environmental Quality Act (CEQA), California State Building Code, and the U.S. Department of Housing and Urban Development (HUD). The evaluation of potential noise and vibration issues is typically associated with new development or major redevelopment in the City.

Goal

Minimize exposure of residents and visitors to excessive noise and consider ambient and peak noise levels and potential sources when determining land use compatibility.

OBJECTIVES AND POLICIES

Objective N-1: Incorporate noise and vibration considerations into planning decisions to maintain or achieve a compatible noise environment for all land uses within the community.

Policies:

N-1a. The City shall use Figure N-1 to determine whether new development has the potential to result in noise/land use conflicts. After review for potential noise exposure from contour maps depicted in Figure N-1, should a project potentially introduce a noise level that would exceed the ambient values detailed in Table N-3, Interior and Exterior Noise Standards in the City, on-site noise levels should be measured to establish the site's CNEL.

N-1b. The City shall require an acoustical study showing the ability to meet California Noise Insulation Standards (California Code of Regulations, Title 24 and Title 25) for any development proposed in an area where noise exceeds Table N-3, Interior and Exterior Noise Standards in the City.

N-1c. Should noise and vibration mitigation be required for development, the following measures shall be considered. The approach to address noise effects shall occur in the following order:

a. Site layout, including setbacks, open space separation, and shielding of noise-sensitive uses from noise-generating uses;

b. Acoustical treatment of buildings;

c. Structural measures, construction of earthen berms, or wood or concrete barriers.

Objective N-2: Consider noise and vibration impacts from rail or U.S. 101 traffic on residential and other noise-sensitive land uses.

Policies:

N-2a. The City shall plan noise-compatible land uses, or design developments with noise attenuation features, near or adjacent to transportation corridors in conjunction with the land use/noise compatibility matrix shown in Figure N-3 to determine the appropriateness of land uses relative to roadway noise.

N-2b. The City shall continue to collaborate and cooperate with Caltrans to landscape or install mitigation elements along U.S. 101 adjacent to residential or noise-sensitive uses to reduce noise impacts. Any noise attenuation features should adhere to relevant policies in the City's Community Design Element.

N-2c. The City shall work with railroad operators to install noise and vibration mitigation features where operations adversely affect existing adjacent residential or other noise-sensitive uses.

N-2d. The City should support the use of alternative noise-reducing paving materials and "traffic calming" devices that reduce traffic noise. The City should also encourage Caltrans to use alternative noise-reducing paving and similar noise-reduction measures within City limits, as applicable. (See the Circulation Element for examples of traffic calming devices).

Objective N-3: Minimize the adverse effects of traffic-generated noise from City streets on residential and other sensitive land uses.

Policies:

N-3a. Site planning and traffic control measures shall be incorporated into the design of development projects to minimize the effects of traffic noise on nearby noise-sensitive land uses.

N-3b. The City shall coordinate with the County to designate local truck routes within the City's Sphere of Influence, with the intent of limiting noise exposure in areas with noise-sensitive land uses within the City.

N-3c. The City shall provide for the development of bikeways and pedestrian paths to reduce vehicle traffic and associated noise.

N-3d. Residential frontages that abut a major thoroughfare should include buffering elements to reduce adjacent noise using yards, forecourts, courtyards, and tree rows. Sound walls should only be used where other noise attenuation methods are infeasible.

Objective N-4: The City will coordinate with the County to address potential conflicts between noise-generating industrial and agricultural activities within the County and residential and other sensitive uses within the City.

Policy:

N-4a. The City will work with the agricultural industry and the County to address conflicts on a case-by-case basis and develop appropriate noise mitigation.

Objective N-5: Ensure that noise-generating industrial and agricultural activities and operations within the City do not conflict with noise-sensitive land uses.

Policies:

N-5a. The City shall require that automobile and truck access to agricultural, industrial, and commercial properties adjacent to noise-sensitive land uses be located at the maximum practical distance from noise-sensitive uses.

N-5b. If new development is located adjacent to noise-sensitive uses, the use of motorized landscaping equipment, parking lot sweepers, or other high-noise equipment shall be limited to between the hours of 7:00 AM and 5:00 PM on weekdays.

N-5c. New development that involves truck deliveries to agricultural, industrial, and commercial properties adjacent to noise-sensitive land uses shall be limited to between the hours of 7:00 AM and 5:00 PM on weekdays

N-5d. Commercial and industrial loading zones shall be designed to minimize noise effects upon sensitive uses.

N-5e. Noise created by new stationary sources, or existing stationary noise sources that undergo modifications, shall be attenuated to ensure noise exposure levels within Figure N-3 are not exceeded for sensitive uses.

Objective N-6: Minimize the effects of short-term noise and vibration events on sensitive land uses.

Policies:

N-6a. The City shall ensure that permitted special events address noise effects upon noise-sensitive receptors.

N-6b. Development activities shall include limitations on construction hours, equipment shielding measures, noise and vibration-reducing features, and advance notice of construction for sensitive receptors.

N-6c. All new equipment purchased by the City shall meet noise performance standards consistent with the best available noise reduction technology.

N-6d. The City should develop good neighbor guidelines to reduce excessive noise and disturbances associated with overnight accommodation or residential areas (e.g., existing residences and residents, visitor-serving accommodation, short-term vacation rentals).

N-6e. Leaf blower use should be limited to the hours between 9:00 AM to 5:00 PM, Monday through Saturday, and shall not exceed noise exposure levels for sensitive receptors.

N-6f. Heating, Ventilation, and Air Conditioning (HVAC) systems should include noise-reducing features and be sited in a manner to limit noise exposure for sensitive land uses.

N-6g. The use, play, or employ of any amplified music, sound, outcry, loudspeaker, or any other instrument or device shall be limited to levels and durations that do not create a noise nuisance.

Implementation Action:

1. *The City shall adopt, maintain, and enforce a noise ordinance to address construction and short-term noise activities to minimize annoyance within the community, as well as stationary sources.*

   Timing: Within 5 years of adoption